

### **REMARKS/ARGUMENTS**

The office action mailed January 9, 2007, has been carefully reviewed and these remarks are responsive to that office action. Reconsideration and allowance of this application are respectfully requested.

Claims 1-46 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1-46 were rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter.

Claims 1, 23, 45, 47 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 18, 28, 34, 39 of co-pending Application No. 10/670,561, filed on 9/25/2003.

Claims 1-19, 23-41 were rejected under 35 U.S.C. 103(a) as being unpatentable over Bellow et al, U.S. Patent No. 6,477,525 in view of Nakano et al, U.S. Publication No. 2003/0217075.

Claim 20-22, 42-44, 46 were rejected under 35 U.S.C. 103(a) as being unpatentable over Bellow et al in view of Nakano as applied to claims 1, 23, above, and further in view of Colossi et al. U.S. Publication No. 2004/0139061.

Claims 1-46 remain in this application. Claims 1, 23, and 45 are currently amended. Claims 47-49 have been canceled without prejudice or disclaimer.

In response to the rejection of claims 1, 23, and 45, these claims have been amended to eliminate a potential "antecedent basis" issue with respect to the recitation of the "reducing the size of the first database table." Applicant, otherwise, traverses the rejections of claims 1-46 under 35 U.S.C. 112, second paragraph. These rejections do not set forth a proper prima facie case of indefiniteness of claims 1-46, under 35 U.S.C. 112, second paragraph, because the rationales set forth in support of these rejections do not interpret the claims as one of ordinary skill in the art would interpret the claims in light of the specification. Instead, the rationales for these indefiniteness rejections improperly require the claims to describe the invention, which is the role of the disclosure portion of the specification, not the role of the claims.

One rationale for the indefiniteness rejections states that "multiple instances of an activity" with respect to both "active and inactive" conditions are not defined. Applicant disagrees. The phrases "multiple instances of an activity" and "active and inactive conditions" are thoroughly and properly defined in at least paragraphs 3-9 and 22-39 of the specification such that a person of ordinary skill would understand these claim terms.

Several of the rationales set forth on page 4 do not properly support the indefiniteness rejections. For example, one of the rationales is that the claims do not actually integrate the first database table and the second database table but just create a record without defining "data types." Another rationale is that the steps of "creating a record in a first database table," "assigning, for records of the multiple instances in the inactive condition, values to the one or more fields," "assigning, for records of the multiple instances in the inactive condition, values to the one or more fields," "deleting from the first table records of instances," and "creating, for records deleted from the first table, a corresponding record in a second database table" lack concrete active limitations as to how the steps are to be accomplished. Another rationale is that "[o]ne of ordinary skill in the art would not be able to determine exactly what must be done to accomplish the goal of the preamble." None of the foregoing rationales properly support a rejection under 35 U.S.C. 112, second paragraph.

On page 5, the office action asks "what is meant by 'reducing the size' of the first database table. Applicant respectfully submits that a person of ordinary skill in the art, interpreting this phrase in view of the specification, would understand the phrase to mean that the size of the first database table gets smaller.

On page 5, the office action states that the phrase "response times" is "nowhere defined with respect to creating record, assigning for records, deleting records." There's no need for the claims to define this phrase with respect to the claim language quoted on page 5 of the office action because the claims recite that the pertinent response times are those "when database users access the records for the instances in the active condition."

The remaining indefiniteness rejections in paragraphs 13-22 of the office action are traversed on similar grounds as those discussed above. In addition, Applicant respectfully

submits that stating that it is unclear "where to add the limitations" from dependent claims does not properly support a prima facie case of indefiniteness.

With respect to the rejections under 35 U.S.C. 101, the invention of claim 1 produces a useful, concrete, and tangible result, namely, reducing the size of the first database table to prevent degradation of response times when database users access the records for the instances in the active condition. Support for this explicit recitation in claim 1 is provided by at least paragraphs 3-12 and Figures 1-3 of this application. The inventions of independent claims 23 and 45 produce the same useful, concrete, and tangible result as the invention of claim 1. As such, applicant respectfully requests withdrawal of the rejection under 35 U.S.C. 101.

In response to the provisional nonstatutory double patenting rejection of claims 1, 23, and 45, applicant will submit a terminal disclaimer, if needed, once the claims of co-pending application 10/670,561 are allowed.

Bello and Nakano do not establish prima facie obviousness of claim 1 because Bello and Nakano, either alone or in combination, do not disclose "each instance having an active condition in which information about the instance is to be modified or an inactive condition in which information about the instance is not to be modified, ... creating a record in a first database table for each of the multiple instances in the active condition, ... deleting from the first table records of instances having values in the one or more fields indicative of the inactive condition thereby reducing the size of the first database table to prevent degradation of response times when database users access the records for the instances in the active condition; and creating, for records deleted from the first table, a corresponding record in a second database table."

Claim 1 is directed to a method for maintaining information regarding multiple instances of an activity, each instance having an active condition in which information about the instance is to be modified or an inactive condition in which information about the instance is not to be modified, the method comprising: creating a record in a first database table for each of the multiple instances in the active condition, each record containing a field for each of a plurality of data types, one or more of the fields in each active instance record having a value indicative of the active condition; assigning, for records of the multiple instances in the inactive condition,

values to the one or more fields indicative of the inactive condition; deleting from the first table records of instances having values in the one or more fields indicative of the inactive condition thereby reducing the size of the first database table to prevent degradation of response times when database users access the records for the instances in the active condition; and creating, for records deleted from the first table, a corresponding record in a second database table.

Bello is directed to rewriting a query in terms of a summary based on one-to-one and one-to-many losslessness of joins. On page 19, the office action cites col. 15, lines 18-22 in support of the assertion that Bello teaches "deleting from the first table records of instances having values in the one or more fields indicative of the inactive condition." But the cited portion of Bello, which is reproduced below, is directed to rewriting a query to remove duplicate common section rows from a materialized view, as opposed to deleting from the first table records of instances having values in the one or more fields indicative of the inactive condition:

If the materialized view contains duplicate rows from the common section, a query rewritten to access the materialized view typically has to be rewritten in a way that requires an additional step of removing duplicate common section rows from the materialized view.

Bello does not disclose, teach, or suggest that the duplicate common section rows are records of instances having values in the one or more fields indicative of the inactive condition. Further, Bello does not disclose "deleting from the first table records of instances having values in the one or more fields indicative of the inactive condition thereby reducing the size of the first database table to prevent degradation of response times when database users access the records for the instances in the active condition."

Bello also does not disclose "creating, for records deleted from the first table, a corresponding record in a second database table." The office action cites column 16, lines 25-30, in support of the assertion that Bello contains such a teaching. This cited portion of Bello is directed to using a "DISTINCT" operation to eliminate the effect of duplicate child-side rows when a join between the common section and the materialized view delta is one-to-many. As such, column 16, lines 25-30, does not disclose, teach, or suggest "creating, for records deleted from the first table, a corresponding record in a second database table."

On page 20 of the office action, paragraphs 0007 and 0014 of Nakano are characterized as disclosing "reducing the size of the first database table to prevent degradation of response times." But, Nakano, either alone or in combination with Bello, does not disclose, teach, or suggest "deleting from the first table records of instances having values in the one or more fields indicative of the inactive condition thereby reducing the size of the first database table to prevent degradation of response times when database users access the records for the instances in the active condition."

Nakano discloses a method for reserving pages of a databases when there is insufficient free area in the databases. (Nakano, paragraph 00002). As part of storing data in an insertion process, a first process, which inserts data into a new block, and a second process that inserts data into areas that became free when data was deleted are used. If a designated event occurs while executing the first process, the insertion process executes the second process instead of the first process. In this way, free areas resulting from previous deletions are reused. (Nakano, Abstract). Paragraph 0007 discusses a free space management table that stores the size of free space for each storage area. Paragraph 0014 discusses preventing the deterioration of storage efficiency and eliminating reorganization, or delaying the reorganization period, without using additional areas and without deteriorating processing performance in insert and delete processes.

So, rather than "deleting from the first table records of instances having values in the one or more fields indicative of the inactive condition thereby reducing the size of the first database table to prevent degradation of response times when database users access the records for the instances in the active condition," Nakano discloses reusing storage areas from which data was previously deleted. Nakano discloses reusing storage areas in order to efficiently use storage and to eliminate or delay reorganization of memory areas, during which access to tables may be prohibited or may incur other associated overhead. (See, Nakano, paragraphs 0004 and 0012). As such, Nakano does not disclose "reducing the size of the first database table to prevent degradation of response times."

For at least the foregoing reasons, Bello and Nakano, either alone or in combination, do not disclose, teach, or suggest "each instance having an active condition in which information about the instance is to be modified or an inactive condition in which information about the

instance is not to be modified, ... creating a record in a first database table for each of the multiple instances in the active condition, ... deleting from the first table records of instances having values in the one or more fields indicative of the inactive condition thereby reducing the size of the first database table to prevent degradation of response times when database users access the records for the instances in the active condition; and creating, for records deleted from the first table, a corresponding record in a second database table." Claim 1 is, therefore, in condition for allowance.

Claims 23 and 45 contain limitations that are analogous to the limitations of claim 1 discussed above. Claims 23 and 45 are, therefore, in condition for allowance for at least reasons similar to those discussed above in connection with claim 1.

Claims 2-22, 24-44, and 46 are proper dependent claims and are, therefore, in condition for allowance.

Further with respect to claim 2, page 21 of the office action cites column 4, lines 60-64, of Bello in support of the assertion that Bello teaches that no record of the second table is updated after being created. This cited portion of Bello is directed, however, to explaining that a materialized view may contain a summary column containing values generated by aggregating values contained in rows produced by a one-to-many lossless join. As such, Bello does not teach that no record of the second table is updated after being created. Claim 2 is, therefore, in condition for allowance for at least these additional reasons.

Claim 24 contains limitations that are analogous to the limitations of claim 2 discussed above. Claim 24 is, therefore, in condition for allowance for at least reasons similar to those discussed above in connection with claim 2.

Further with respect to claim 3, page 21 of the office action cites column 8, lines 37-40, of Bello in support of the assertion that Bello teaches that the inactive condition corresponds to an instance of the activity being complete. This cited portion of Bello is directed, however, to explaining the three types of sets of joins that are produced by comparing a join graph of a material view with a join graph of a query. As such, Bello does not teach that the inactive condition corresponds to an instance of the activity being complete. Claim 3 is, therefore, in condition for allowance for at least these additional reasons.

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Claim 25 contains limitations that are analogous to the limitations of claim 3 discussed above. Claim 25 is, therefore, in condition for allowance for at least reasons similar to those discussed above in connection with claim 3.

### **CONCLUSION**

It is believed that no fee is required for this submission. If any fees are required or if an overpayment is made, the Commissioner is authorized to debit or credit our Deposit Account No. 19-0733, accordingly.

All rejections having been addressed, applicant respectfully submits that this application is in condition for allowance, and respectfully requests issuance of a notice of allowance.

Respectfully submitted,

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